Public Private Partnerships for California EVSE Market

John Rhow
Senior Financing Advisor to Kleiner Perkins Caufield & Byers

April 2014

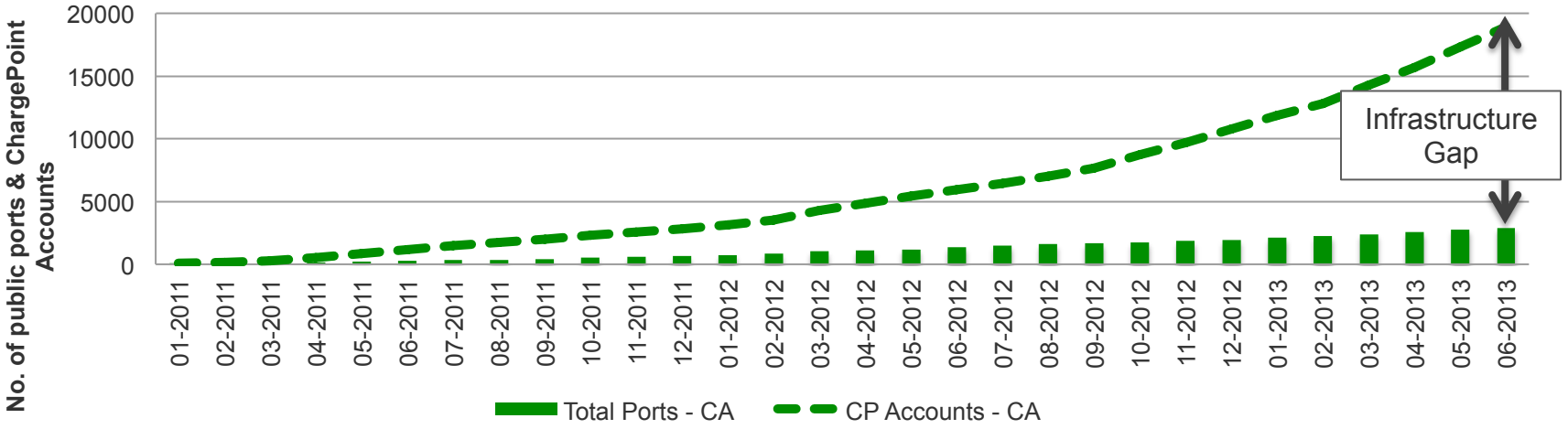
Key Concepts

1. Existing funding for EV infrastructure is insufficient to meet State's goals for electric vehicle (EV) adoption
2. Private sector is not ready to make meaningful investments given station revenue / utilization risk
3. Public-private partnership (PPP) approach to utilizing CEC grant program will leverage State's $$ and promote proper market behavior
4. CEC / STO has the opportunity to unlock private capital, accelerate EVSE deployment in challenged sectors, while receiving a return on its investment

Current Market Profile of State EV Infrastructure

- State's policies / grant programs – tremendous success in fostering EV adoption!
  - 1/3 of nation's EVs and surpassed all industry projections (> 2.5% of vehicles)
- However, biggest obstacle to meeting Governor's mandate of 1.5 million ZEV goal by 2025 is EV charging, especially in challenged sectors like multi-family!
- Projected EV infrastructure capital requirement over next 5-10 years ranges from $500 million to $2 billion

Rise in State's EV Drivers Outpaces Available Public Ports
(Source: ChargePoint Portfolio Data as of Fall 2013)



EVSE Market at Critical Growth Point

Station Utilization Risk Deterring Wide-Spread Deployment

Full Subsidization / Grant Model (Stage 1)

+ Extremely effective in nascent stages of emerging technology / industry
+ Current Market Challenges:
  - Limited government subsidy $$ vs State's EV infrastructure need
  - Potentially distorts market behavior (example: poor siting of 100% subsidized chargers)
  - Need to create sustainable model attractive to both customers & developers / investors

Transition to Financing Solutions (Stage 2)

+ Catalyst for growth in other clean-tech sectors such as distributed solar
+ Solution to Current Market Challenges:
  - Deep pool of global capital for transportation and energy infrastructure assets
  - Private sector "skin-in-the-game" ensures proper siting and maximizing utilization
+ BUT…. Station utilization / revenue risk represents "gap" to secure capital:
  - Unlike solar, no proven / concrete cashflow from station (high variance in utilization)

PPP well suited for EV Infrastructure

+ Government wants to support EVSE
  - Clear policy goal and recognition of EV infrastructure as critical infrastructure need
  - Government “investment” horizon is long term, not subject to short-term swings in market
+ Private Sector wants to invest in EV infrastructure, but…
  - Site hosts recognize ownership benefits, but does not fit classic pay-back / ROI paradigm
  - Cities want to attract drivers, but need concrete revenue “offset” to manage capital budgets
  - Infrastructure investors see path to attractive returns, but need cashflow visibility
+ Insuring station utilization / revenue risk bridges the financing “gap”!
  - State “capitalizes” utilization risk which the market is not ready to absorb today
  - Deployed AB 118 $$ repaid through future station utilization revenues
  - Not only leverages subsidy dollars, but creates vehicle for return on investment / recycling
+ Potential AB 118 deployment mechanisms / vehicles
  - Upfront funding for site owner: i) lower upfront costs; ii) lower or cover initial financing costs
  - Credit enhancement for financiers: i) loan guarantee; ii) debt reserve; iii) subordinate debt

Financing Subsidy Example
Subordinate Debt

Sources/Uses

+ AB 118 $$ cover [20%] of upfront costs (hardware and installation)
+ Private Sector (site hosts, developer, financier) provides balance of cost [80%]

Repayment Mechanism

+ Subsidized station charges flat or variable “transaction fee” paid by EV driver
+ Transaction fee collected by network provider & deposited into State account
+ STO sets “target IRR” (i.e. 2-4%) which when achieved, allows for step-down of driver transaction fee and/or sharing with private sector

Program Benefits

+ Funds can be re-deployed as collected, reducing need for future subsidies
+ Potentially attractive / scalable investment proposition aligned with State policy

Conclusion

PPP approach – pathway to fund State's EV Infrastructure needs

+ Leverages limited State subsidy dollars
+ Investment mechanism to recycle returns in creating "revolving" program

Addresses largest hurdle to EVSE owners

+ Government takes on utilization risk; largest hurdle for private sector

Government capable of tailoring program to meet objectives

+ Ability to focus on specific verticals: MuD, Workplace, Public, etc.

Similar Subordinate Capital Programs Have Proven Successful

+ Warehouse for Energy Efficiency Loans (WHEEL)
+ Connecticut: CEFIA / C-PACE